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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,280	12/15/2003	Che-Yu Li	H1823-00004	4289

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EXAMINER

LEON, EDWIN A

ART UNIT	PAPER NUMBER
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2833

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/736,280

Applicant(s)

LI, CHE-YU

Examiner

Edwin A. León

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12, 16, 21-25, 31, 33, 34 and 36-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 16, 21-25, 31, 33, 34 and 36-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of Species I, Figs. 2-8 in the reply filed on January 18, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the eight discrete wires that each of the plurality of interlaced anneal wires must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

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changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 7-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It is not described in the Specification how each of the plurality of interlaced and annealed wires comprise eight discrete wires. Furthermore, the Specification and the Drawings only describe and show the plurality of interlaced and annealed wires being eight discrete wires but not each one having of the plurality of interlaced and annealed wires comprise eight discrete wires. Appropriate correction is required. For

examination purposes Claims 7-12 will not be examined in their merits.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-6, 21-25, 31 and 36-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Miller et al. (U.S. Patent No. 3,686,926). With regard to Claims 1 and 36, Miller et al. discloses an electrical contact (40) comprising a plurality of interlaced, annealed (Column 7, Lines 42-45), and unsupported wires (41-44). Regarding to Claim 36, the limitations" formed by a process comprising (i) interlacing a plurality of conductors so as to form a continuous cylinder wherein the interlaced conductors elastically engage one another so as to be substantially only elastically deformed, (ii) annealing the continuous cylinder so as to substantially eliminate the elastic engagement of the conductors; and (ii1) cutting the continuous cylinder so as to form at least one open-ended cylinder" have been given little patentable weight since the method of forming the device is not germane to the issue of patentability of the device itself. See Figs. 2 and 5.

With regard to Claim 2, Miller et al. discloses the plurality of interlaced and annealed (Column 7, Lines 42-45) wires (41-44) comprising a woven (Column 7, Lines

9-14) and annealed (Column 7, Lines 42-45) structure that provides a plurality of individual beam-sections. See Figs. 2 and 5.

With regard to Claims 3 and 21-23, Miller et al. discloses the plurality of interlaced and annealed (Column 7, Lines 42-45) wires (41-44) comprising at least three discrete wires (41-44) that have been manipulated together so as to interlace them to form a unitary structure (Fig. 5). The method limitations are deemed inherent and are rejected as shown above. See Figs. 2 and 5.

With regard to Claim 4, Miller et al. discloses the plurality of interlaced and annealed (Column 7, Lines 42-45) wires (41-44) comprising eight discrete wires (41-44) that have been manipulated together so as to interlace them to form a unitary structure (Fig. 5). See Figs. 2 and 5.

With regard to Claim 5, Miller et al. discloses the plurality of interlaced and annealed (Column 7, Lines 42-45) wires (41-44) comprising at least three discrete wires (41-44) that have been manipulated together so as to interlace them to form a unitary tubular structure (Fig. 2) without a central support structure around which the wires (41-44) are wound. See Figs. 2 and 5.

With regard to Claims 6, 24-25 and 31-32, Miller et al. discloses the plurality of interlaced and annealed (Column 7, Lines 42-45) wires (41-44) comprising at least three discrete wires (41-44) that have been manipulated together so as to interlace them to form a unitary tubular structure (Fig. 2) without at least one of an outer and inner support structure. The method limitations are deemed inherent and are rejected as shown above. See Figs. 2 and 5.

With regard to Claim 39, Miller et al. discloses an open-ended substantially cylindrical electrical contact (40) comprising a woven (Column 7, Lines 9-14) plurality of conductors (43) having a longitudinal axis, wherein the woven (Column 7, Lines 9-14) conductors (43) comprise an absence of either elastic or plastic deformations such that longitudinal deflection of the electrical contact (40) results in substantially only elastic deformation of the plurality of conductor. See Figs. 2 and 5.

With regard to Claims 37-38 and 40, Miller et al. discloses an electrical contact (40) comprising a woven (Column 7, Lines 9-14) plurality of conductors (43) having a deflection axis, wherein the woven (Column 7, Lines 9-14) plurality of conductors (43) comprise an absence of either elastic or plastic deformations such that deflection of the electrical contact (40) along the deflection axis results in substantially only elastic deformation of the plurality of conductors (43). The method limitations are deemed inherent and are rejected as shown above. See Figs. 2 and 5.

With regard to Claim 41, Miller et al. discloses an open-ended substantially cylindrical electrical contact (40) comprising a woven (Column 7, Lines 9-14) plurality of conductors (43) having a longitudinal axis, wherein the woven (Column 7, Lines 9-14) conductors (43) comprise an elastically relaxed state such that longitudinal deflection of the electrical contact (40) results in substantially elastic deformation of the plurality of conductors (43). See Figs. 2 and 5.

With regard to Claim 42, Miller et al. discloses an electrical contact (40) comprising a woven (Column 7, Lines 9-14) plurality of conductors (43) having a deflection axis, wherein the woven (Column 7, Lines 9-14) plurality of conductors (43)

comprise an elastically relaxed state such that deflection of the electrical contact (40) along the deflection axis results in only elastic deformation of the plurality of conductors (43). See Figs. 2 and 5.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Miller et al. (U.S. Patent No. 3,686,926). Applicant's admitted prior art discloses a connector system comprising, in combination: a housing (E) defining a plurality of openings (Page 2, Lines 7-9); and an electrical contact (F) disposed in each of the openings (Page 2, Lines 7-9). See Fig. 1.

However, Applicant's admitted prior art doesn't show the electrical contact comprising a plurality of interlaced, annealed and unsupported wires.

Miller et al. discloses an electrical contact (40) comprising a plurality of interlaced, annealed (Column 7, Lines 42-45), and unsupported wires (41-44). See Figs. 2 and 5.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify system of Applicant's admitted prior art by including the



electrical contact comprising a plurality of interlaced, annealed and unsupported wires as taught in Miller et al. in order to improve the structural strength of the system.

9. Claims 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (U.S. Patent No. 3,686,926) in view of Fox (U.S. Patent No. 4,242,789). Miller et al. discloses the claimed invention except for the contact being photo-etched.

Fox discloses a wire (Column 3, Lines 34-50) being formed by photo-etching (Column 3, Lines 51-55). See Column 3, Lines 34-55.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the contact of Miller et al. by photo-etching as taught in Fox in order to predetermine the shape of the contact more effectively.

### ***Conclusion***

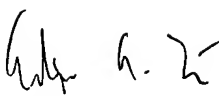
10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ziegler et al. (U.S. Patent No. 3,954,572), Schurman (U.S. Patent No. 3,639,978), Dauser (U.S. Patent No. 3,790,918) and Tornoe et al. (U.S. Patent No. 4,781,640) disclose electrical contacts having plurality of interlaced, annealed and unsupported wires.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edwin A. León whose telephone number is (571) 272-2008. The examiner can normally be reached on Monday - Friday 10:00-6:30.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571-272-2800, extension 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Edwin A. Leon  
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March 31, 2005

  
TRUCT. NGUYEN  
PRIMARY EXAMINER